

Prostate Seed Brachytherapy

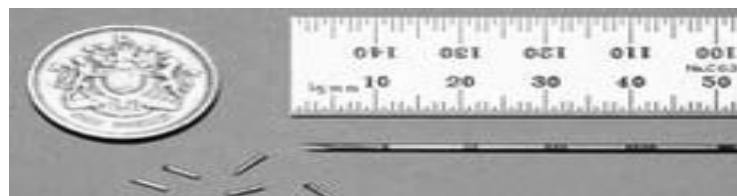
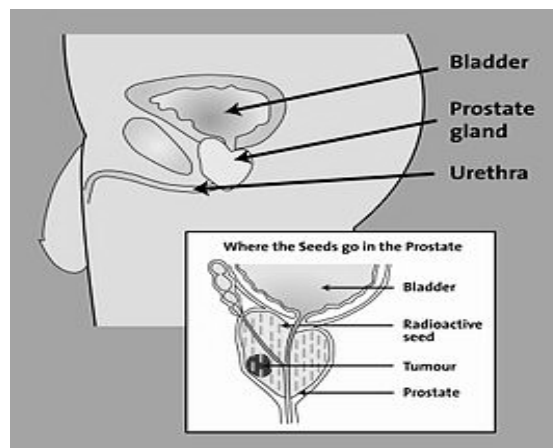
Radiotherapy Department
Lincoln County Hospital
www.ulh.nhs.uk

The aim of this leaflet is to explain seed brachytherapy and the procedure you will go through.

What is Prostate seed brachytherapy?

Prostate brachytherapy is a form of radiation treatment delivered from within the prostate. It is an alternative to both radical surgery and external beam treatment (radiation delivered to the pelvis from outside the body). Permanent seed brachytherapy is one form of brachytherapy, which is also known as low dose rate brachytherapy.

The procedure involves implanting radioactive Iodine 125 seeds under general anaesthetic directly into the prostate gland, using thin needles inserted through the perineum (the area of skin between the scrotum and the anus). There is no cut, but there are small puncture wounds that heal very quickly.



The seeds are very small, each being about 5mm in length and 0.5mm thick.

They give off low level radiation continuously for approximately two years. The radiation is concentrated in your prostate thereby reducing the amount of normal tissue treated. The seeds remain in the prostate permanently, most of the radiation being released during the first three months.

What appointments will I have before the treatment process begins?

Before the volume study you will receive an appointment for a brachytherapy assessment with a brachytherapy radiographer so that your past medical history and general health can be checked. You will need to undertake some general health checks at this appointment such as blood pressure, height, weight, blood tests etc. You will also have an ECG (tracing of your heart) and be given information about fasting times prior to the anaesthetic.

Your oncologist will prescribe some medications that you will collect from the hospital pharmacy. One is an antibiotic and the other is a medication that helps with urine flow after the procedure, (this will be explained further at the brachytherapy assessment).

The whole appointment will take 2 to 3 hours.

Lincoln brachytherapy department uses a two stage procedure:

Volume study – an ultrasound probe is placed into the rectum under general anaesthetic. These images provide a 3D model of the prostate which is then used to calculate the number of seeds required for treatment. Very occasionally, the specialist may find that the treatment is technically impossible because of the position of your pelvic bones in relation to your prostate gland. If this happens, your specialist will discuss alternative treatment options with you.

You will be admitted to Surgical Admissions Lounge (SAL) on the morning of the volume study. We will collect you from SAL and take you to the brachytherapy suite. You will be returned to SAL from theatres after recovery from the anaesthetic. Before being discharged from SAL you will be asked to eat and drink and you will have to urinate twice before being discharged.

You will need to bring a relative or friend with you to drive home as you will not be able to drive for 48 hours after the anaesthetic.

Seed Implant - 4 to 5 weeks later the implant is carried out, again under anaesthetic. You will stay on Waddington ward for 1 night before the procedure and then discharged later on in the afternoon the following day after the procedure (as long as you have no issues with urinating).

For both stages you will need to follow a gas reducing diet (which will be explained during your brachytherapy assessment) for 3 days before each procedure and you will be provided with an enema to use on the morning of the procedure, to ensure that the lower bowel is clear. We may also ask you to stop taking some medications which we will discuss with you, but these must be resumed after the implant.

What happens during the seed implantation?

When you are asleep a catheter will be placed into your bladder and an ultrasound probe is inserted into your rectum. Images of your prostate are taken and the seeds are implanted via small needles.

The implant takes about 2 hours and when it is complete the probe and catheter are removed.

You will be taken to theatres for recovery and from there to Waddington ward (telephone 01522 572255).

Will I be sore immediately after the implant?

Your perineum might feel sore and be a little bruised after the procedure and you may notice some blood in your urine. This is normal and should settle within a few days.

For the two days after the implant you should avoid heavy lifting or strenuous exercise. After that you should be able to continue with normal activities.

What are the immediate side effects of the permanent seed implant?

Urinary: The implant will cause the prostate to swell slightly and this can create pressure on the urethra (the tube that passes from your bladder to the tip of your penis) as it passes through the prostate.

You might notice a weak flow when you empty your bladder or have an urgent need to empty the bladder. You may have difficulties starting to pass urine and possibly a stinging sensation when passing urine.

The radiation reaction from the seeds begins about one week after the implant. These symptoms can get worse during the first few weeks after the implant but usually start to improve over the next few months. The Tamsulosin that you have been prescribed helps to reduce any symptoms. You could also try 1 to 2 glasses of cranberry juice (unless you take warfarin) and/or gradually drinking 2 to 2.5 litres of water, fruit juices or squashes.

Tea and coffee contain caffeine which can stimulate urine output so it is advisable to switch to decaffeinated drinks or reduce input, especially before going to bed. If frequency is an issue at night time try to reduce fluid intake during the evening.

10 to 15% of patients get acute urine retention and you must seek help quickly if you have great difficulty passing urine. Contact this department or your local doctor or go straight to A and E. Discomfort or pain or swelling of your lower tummy indicates that there could be a problem and a catheter will usually need to be passed into your bladder to drain the urine away.

Rectal: Occasionally you may notice an increased need to open the bowels, but this gradually settles. You may pass a small amount of blood from the rectum, but again this usually stops over time. If the rectum becomes inflamed and you experience a burning sensation after opening your bowels, you may need some anti-inflammatory medication to put into your rectum.

Tiredness: The brachytherapy seeds continue to release radiation for several months so you may find that you continue to feel tired after the implant. This may be compounded by the fact that your sleep may be interrupted by having to get up to go to the toilet.

Long term effects

There is a small risk (of less than 1%) of incontinence following a permanent seed implant.

About 30% (3 in 10) of patients under the age of 60 find they have a problem gaining or maintaining an erection (impotence). This occurs more often for patients over 60 years of age. If impotence occurs it usually responds to treatment so please discuss this with your doctor who may also request for you to be seen in the Prostate Cancer CNS clinic for assessment prior to starting the appropriate treatment.

Less than 1% of patients suffer from persistent inflammation of the rectum (proctitis).

The prostate is responsible for semen production and most men will notice a reduction in the volume of the ejaculate after the implant and eventually the ejaculate may dry up altogether. This process can reduce your fertility but you should still need to take precautions to prevent pregnancy.

Will I be radioactive?

The seeds are radioactive but you are not. Objects that you touch or items that you use do not become radioactive. Other people may use linen, clothing, tableware, or dishes after you without special precautions. Your bodily waste (urine and stool) are not radioactive.

The radiation emitted by the seeds has a very low energy and most of it is absorbed by the prostate. There is a slight possibility that a seed could pass out in your urine during the first few days. We will sieve your urine during your hospital stay but this will not be necessary to continue when you go home. For the two week period after discharge from the hospital use a toilet rather than a urinal.

If a seed is found after you return home, **Do Not** attempt to handle it. Pick it up with spoons or long handled tweezers and flush it down the toilet. Always let your specialist team know if you think you have passed a seed. It does not mean your treatment will stop working because the amount of radiation left in the prostate will still be enough to treat your cancer.

There are no restrictions on travel or contact with most adults. In the first two months do not sit closer than 0.5 metres to pregnant women or women who suspect they may be pregnant, but you may greet them as normal and spend time in the same room. It is safe to sleep in the same bed as your partner as long as she is not pregnant.

Precautions should be taken if in contact with small children in the first two months after the seed insertion. Avoid nursing children on your lap for any length of time, or sitting less than 0.5 metres from them. However, you can cuddle or hold them at chest level whilst standing for a few minutes each day.

Is sexual intercourse safe?

Ejaculation can cause a seed to be dislodged so it is important to not have any sexual activity during the first two weeks after the implant. After that period a condom must be worn for the first five ejaculations no matter how long since the implant, whether this is during sexual intercourse, oral sex or masturbation. The used condom must be double wrapped before placing in the dustbin.

You may notice that the semen is either black or brown, this being a result of bleeding at the time of the implant.

If your partner is of child bearing age it is strongly advised that you do not father a child within the first 2 years after the implant as the radiation may harm an unborn child. If your partner is pregnant or becomes pregnant contact this department so that the risk to the unborn child can be assessed.

What follow up will I have?

Around 4 to 6 weeks after the implant you will have a CT scan to check the positions of the seeds within the prostate. This may entail gel being put into the urethra so it shows up on the CT scan, this is painless but can be uncomfortable, you will also see your oncologist for a follow up appointment.

You will also be sent for a chest x-ray and MRI scan, these appointments are for checking seed position only and monitoring the effectiveness of the treatment so you will not receive any scan results.

The effectiveness of the treatment will be assessed at your regular appointments with the doctors, who will examine you and take blood tests.

What if I need any other pelvic treatment or surgery?

If this happens within two years of the implant it is important that the doctor or surgeon contacts this department for advice.

It is safe to have an MRI scan if needed for other investigations.

Alert card

We will give you an alert card after your implant when you come for an x-ray of your pelvis. It carries information about the implant and some telephone contact numbers. You will need to carry it for 2 years.

Your next of kin must be told about the card so they can act on it if you have a sudden illness or accident, or if you die. The card must be shown to any doctors dealing with you so that they can seek advice regarding suitability of treatment options. In the event of death within two years, mortuary staff and funeral directors must also be made aware of the implant due to the radiation hazard.

In the event of death within two years of the implant, there is no issue where burial is chosen, however, cremation cannot take place without special arrangements being made if two years have not expired. Next of kin must contact the department for advice.

Some very sensitive security radiation monitors at airports may be triggered so you may need to show your alert card.

Contact numbers:

Please remember that we are here to help you. The following contact details may be useful:

Dr T Sreenivasan
Consultant Clinical Oncologist, Lincoln County Hospital
Secretary Telephone: 01522 572212

Dr M Panades
Consultant Clinical Oncologist, Lincoln County Hospital
Secretary Telephone: 01522 572218

Mr I Mark
Consultant Urologist, Lincoln County Hospital
Secretary Telephone: 01522 573974

Melanie Fisher, Advanced Practitioner Brachytherapy
Lucy Darby, Advanced Practitioner Brachytherapy
Lincoln County Hospital
Telephone: 01522 572243

Out of hours in cases of emergency only
Waddington Ward, Telephone: 01522 307199/307198

Notes/Questions?

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Useful websites:

http://www.bbc.co.uk/health/mens_health/issues_prostate.shtml
www.cancerbackup.org.uk/Home
www.cancerhelp.org.uk
www.cancerresearchuk.org

References

If you require a full list of references for this leaflet please email patient.information@ulh.nhs.uk

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If you require this information in another language, large print, audio (CD or tape) or braille, please e-mail the Patient Information team at patient.information@ulh.nhs.uk